



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/623,992 | 07/21/2003 | Guangming Yin | BP2517 | 5495 |

7590 07/31/2006
Bruce E. Garlick
P.O. Box 160727
Austin, TX 78716-0727

| EXAMINER |
|----------|
|----------|

SHINGLETON, MICHAEL B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2817

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,992

Applicant(s)

YIN, GUANGMING

Examiner

michael shingleton

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) 7-9 and 26 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6, 10-25 and 27 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Applicant's election with traverse of Group I, Species I in the reply filed on 4-18-2006 is acknowledged. The traversal is on the ground(s) that the claims define a single disclosed embodiment of an invention. This is not found persuasive because the fact is that the demultiplexer subcombination defines one embodiment and the multiplexer defines another embodiment of the invention. The fact that these subcombinations can be useable together does not mean that these subcombination can not be restricted. Note the previous restriction requirement. Also the election of species requirement applicant has not made a positive statement that these species are not patentably distinct from each other. In fact the number of species is a clear indication that more than one embodiment exists.

The requirement is still deemed proper and is therefore made FINAL.

Double Patenting

Claims 1-6, 10-14, 21-25 and 27 (Note that claims 7-9 and 26 have been withdrawn as directed to the non-elected invention.) are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-27 of U.S. Patent No. 6,909,332 in view of Gupta 6,362,698. The claims of the '332 patent are directed to the same basic multiplexer subcombination and the demultiplexer sub-combination. However, these claims are silent on the use of a vco that has filtering circuit composed of a capacitor and variable resistor. Note that the elected invention of figure 8A only has a FET 406 and this accordingly to applicant has a capacitor and variable resistor structure. Gupta discloses that a vco having a capacitor and variable resistor structure is well known in the art. Note the FETs M7 and M8. This clearly like that of applicant's figure 8A provides for a filtering function thereby enhancing the function of the vco. Thus it would have been obvious to add a vco with a filter function to the claimed invention of the '332 as this is well known for enhancing the function of the vco as taught by Gupta. In other words the addition of a vco that has a filter function does not present a patentable distinction over the claimed vco of the '332 patent. Also note that the claimed method claims that include claim 21 of the instant application is a result of the structure made obvious above and accordingly, these claims cannot form a patentable distinction over the invention made obvious above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segawa et al. 6,342,818 (Segawa) in view of Gupta 6,362,698 (Gupta).

Figure 1 of Segawa discloses a pll or phase locked loop structure having the phase detector, the charge pump the filter the vco and the divider as claimed. Segawa is silent on the structure of the vco. Segawa is also silent on the intended use statements like the pll is used to produce a reference clock signal or applicant's intention of connecting the phase detector to a first bit stream data clock, etc.. However, since the pll structure of Segawa is the same basic structure as claimed this structure is fully capable of being used as intended and accordingly will meet these recited claim limitations.

Gupta discloses a common art-recognized equivalent vco structure having the two resistors formed by M7 and M8 with M8 also forming the capacitor of the filtering circuit that inherently filters out noise just like Figure 8A of applicant's invention. (Note the above double patenting rejection that describes the elected invention of Figure 8A. Also it is respectfully requested that applicant please point out the capacitor element of the filter in Figure 8A if it differs from that described by the examiner.)

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the vco of Segawa with one like Gupta because as the Segawa reference is silent on the exact structure of the vco one of ordinary skill in the art would have been motivated to utilize any art recognized equivalent vco structure including the vco structure of Gupta for the vco structure of Segawa.

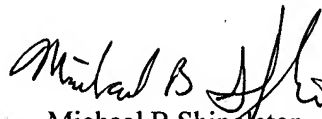
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is (571) 272-1770.

Art Unit: 2817

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal, can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 and after July 15, 2005 the fax number will be 571-273-8300. Note that old fax number (703-872-9306) will be service until September 15, 2005.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MBS
July 7, 2006


Michael B Shingleton
Primary Examiner
Group Art Unit 2817